



Lernen mit textgenerativer KI – Informationen für die Eltern



ENGLISCH



**LEHREN UND LERNEN
IN DER DIGITALEN WELT**

#BildungslandNRW

Dear Parents,

Artificial intelligence (AI) is playing an increasingly important role in many areas of our lives. Since the release of ChatGPT in November 2022, interest in this topic has grown significantly. But what role does AI play in schools and in your child's education?

It is very important that your child learns to use digital media safely and responsibly. This also includes handling AI technologies correctly in order to prepare for a digital world. The Ministry of Education and Schools of the State of North Rhine-Westphalia (MSB NRW) issued an AI guideline shortly after the release of ChatGPT. The aim of this guideline is to use AI responsibly and to support learning processes for the individual learning of your child – taking into account equal opportunities and dat.

In this parent information flyer, we would like to inform you, dear parents, about what AI is, how AI can help your child learn, and what challenges and risks may arise. We have also prepared some suggestions for using this technology, which you can try out together with your child. In the future, you will find updated information about AI on the MSB website for teaching and learning in the digital world: www.lernen-digital.nrw.

1. WHAT IS AI?

Artificial intelligence (AI) is a field of computer science. AI is the study of programming computers to perform tasks that normally require human intelligence. Large Language Models (LLM) such as ChatGPT, Perplexity or others are examples of generative AI. Generative means that LLMs can independently generate new content. An LLM is a computer program that understands large amounts of text and can write texts itself.

THIS IS HOW GENERATIVE AI WORKS:

Learning: The AI is trained with a lot of different data and learns to recognize patterns and connections. An image recognition AI can e.g. B. learn to distinguish cats from dogs by training it with many different pictures of cats and dogs. When training an LLM, you use a lot of texts so that you learn the rules and patterns of the language. For example, it learns which words often appear together and how sentences are structured.

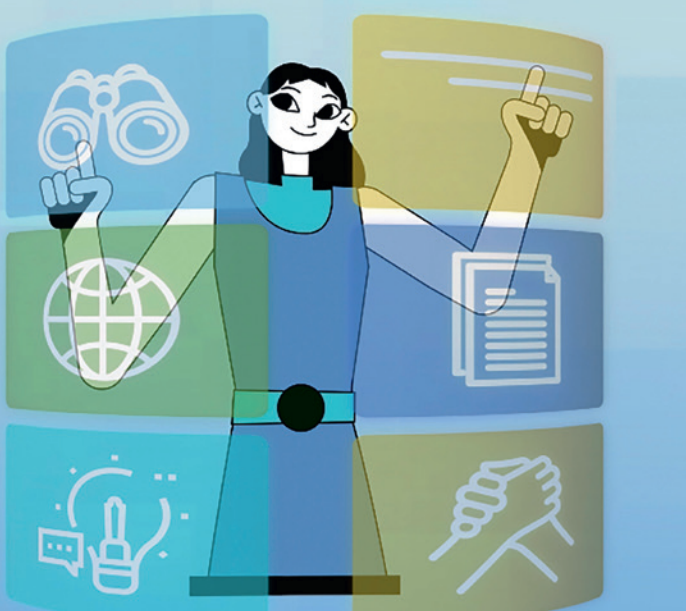
Understanding: AI uses special algorithms (computational processes) to solve problems or complete tasks. When you ask a question or write something, the LLM examines the text and tries to understand what you mean. It uses what is learned from the training to see the connection.

Apply: The LLM generates an answer by Select appropriate words and sentences. It uses what it has learned to formulate an answer that is likely for your question or text. You should always check this answer because it is possible that the LLM is “hallucinating” (see below).

*Try the following prompt with your child
(prompt) in an AI application:*

I attend grade 8 at a comprehensive school. You are my learning companion in German for short stories. You should observe my learning process and create exercises for my learning progress. You should ask me questions, wait for my answers and visibly improve my texts. The aim is to provide a synopsis and to be able to confidently recognize the characteristics of a short story.





2. OPPORTUNITIES OF AI: HOW CAN AI HELP WITH LEARNING?

A study by the Vodafone Foundation conducted in March 2024 showed that about three-quarters of young people are already using AI applications. But how can AI enrich the learning process in the classroom and at home?

Learning Support and Motivation

AI applications can adapt to the individual needs of your child. This makes learning tailored to your child. When AI applications are used as tutors, they can answer questions and provide explanations as to why a solution is incorrect.

Feedback Provider

Learners can receive feedback on their tasks from AI at any time. What has been done well? What points need to be revised? What spelling mistakes should be corrected? AI applications can help with creating and editing texts – some even in multiple languages.

Individual Support

When AI recognizes strengths and weaknesses, it can be used to create tailored exercise materials. This way, specific problem areas can be worked on, or the next challenge can be provided according to the child's performance level.

3. CHALLENGES AND RISKS: WHAT SHOULD I BE AWARE OF WHEN USING AI?

AI Application Hallucinations

AI systems can provide incorrect or inaccurate information. A large language model (LLM) generates a response by selecting words that often occur together in a given context. This doesn't always have to make sense. Therefore, it is always necessary to verify the provided information.

Bias

AI models can develop various forms of bias during training. They often reflect the biases and stereotypes present in the training data. In educational scenarios, this can lead to undesirable effects and discrimination.

Try it yourself with the following prompt: "Write a short story for children about Peter and Anna having an adventure on a farm."

Deepfakes

Deepfake technologies allow media content such as videos, images, and audios to be manipulated. These representations become extremely realistic: faces in videos can be easily swapped, or people can be made to say things they never actually said. With the help of AI, such manipulated representations can be created much faster, more easily, and more convincingly.

Try it out with the WDR Deepfake Quiz or the Klicksafe Quiz for young people up to 14 years old.

Social Media

In social media, AI is used to personalize content for the user. Over time, AI gets better at recognizing which products and posts appeal to you. However, through these "filter bubbles," the impression may arise that most other people share your opinion or are interested in similar things.

Privacy and Data Protection

Training AI requires constantly updating data from various sources. For example, user inputs are often used for training. This is especially problematic when personal data is used. Below you will find recommendations from the Federal Office for Information Security (BSI) on the safe use of AI.

Testing Opportunities

AI Guideline
<https://url.nrw/kileitnrw>



Soekia
<https://url.nrw/kisoek>



MSB-Homepage zum
Lehren und Lernen in
der digitalen Welt
<https://url.nrw/kiimmsb>



Deepfake-Quiz
<https://url.nrw/kitest1>



Vodafone Jugendstudie KI
<https://url.nrw/StudieVS>



Klicksafe-Quiz
<https://url.nrw/kitest2>



Bundesamt für Sicherheit
und Informationstechnik
<https://url.nrw/kisicher>



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